Investigation Report
Department of Health
Clean Water Branch

I D #: PA0991 Date of investigation: 12/23/2010

Permit/File/WQC No: R50A533 Island: Oahu Facility: City and County of Honolulu

Complaint/Background Description:

On December 23, 2010, the Department of Health (DOH), Clean Water Branch (CWB), conducted an inspection of the City and County of Honolulu (CCH) Waimanalo Gulch municipal solid waste landfill (Landfill) which is located at 92-460 Farrington Highway, Kapolei, Hawaii. The inspection was conducted in response to a notification that the Landfill was discharging storm water contaminated with leachate through the Landfill's detention basin to the Pacific Ocean. Matthew Kurano, Jamie Tanimoto, and Michael Tsuji of the DOH-CWB conducted the inspection. Mr. Justin Lottig, Market Area Environmental Protection Manager for Waste Management was present during the inspection. Waste Management operates the Landfill.

Permit History

The CCH, Refuse Division, owns the Landfill and has National Pollutant Discharge Elimination System (NPDES) permit coverage through a general permit authorizing the discharge of storm water associated with industrial activities from the Landfill to State waters. The Landfill's Notice of General Permit Coverage (NGPC), File No. HI R50A533, only authorizes the discharge of storm water which has come into contact with landfill activities. Discharges of effluent, leachate, or other wastewater discharges are not permitted by the issued NGPC.

The NGPC, File No. HI R50A533, was effective as of August 30, 2010, and expires on October 21, 2012.

Findings Description:

The weather was mostly cloudy throughout the inspection. Heavy rains preceded the inspection. The following findings were either observed or noted before, during or after the inspection:

1) On December 23, 2010, the DOH-CWB was notified by the DOH, Solid and Hazardous Waste Branch (SHWB) that the Landfill was discharging leachate to State waters. The notification to the DOH-CWB was made by the DOH-SHWB after storm water contaminated with leachate was observed being pumped from the Landfill by the DOH-SHWB representatives earlier that day. In response to the notification of discharge by the Landfill, DOH-CWB representatives conducted an investigation into the reported discharges.

2) At approximately 3:30 p.m. on December 23, 2010, M. Kurano, J. Tanimoto, and M. Tsuji met with J. Lottig of Waste Management at the Landfill (Image 1). J. Lottig stated that on Sunday, December 19, 2010, the Landfill experienced a heavy rain event. J. Lottig stated that as a result of the rain event and a failure in the Landfill's storm water bypass system, the E6 cell was inundated with storm water. J. Lottig stated that between Sunday afternoon on December 19, 2010, and December 23, 2010, the Landfill intermittently pumped storm water which accumulated in the Landfill's E6 cell into the Landfill's storm water drainage system. The Landfill's storm water drainage system discharges to the Pacific Ocean at a shoreline outfall of the Ko Olina resort. J. Lottig indicated that storm water that was pumped may have contacted solid waste.

3) By definition in Hawaii Administrative Rules, Section 11-58.1-03, "Leachate" means water or other liquid that has percolated or passed through or emerged from solid waste and contains dissolved, soluble, suspended, or miscible materials removed from the waste or due to contact with solid waste or gases therefrom. Storm water is defined in Hawaii Administrative Rules, Section 11-55-01 as, "...storm water runoff, snow melt runoff, and surface runoff and drainage." The Landfill is authorized to discharge storm water from the Landfill's storm water drainage system. The Landfill is not authorized to discharge leachate to State waters. Effluent from the Landfill's leachate collection system is transported to a wastewater treatment plant for proper treatment and disposal.

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4) J. Lottig stated that the E6 cell was last in operation on Saturday, December 18, 2010, and that a 12" layer of intermediate "cover" had been placed on the municipal solid waste at the end of the business day. J. Lottig stated that the E6 cell contains solid waste and a leachate collection system. J. Lottig stated that the E6 cell has approximately 40 vertical feet of constructed cells within it. Contents of the E6 cell include municipal solid waste such as general refuse, medical waste, as well as intermediate cover material. J. Lottig stated that the E6 cell has a leachate collection system that has a leachate sump which collects leachate from the E6 cell. A solid waste filled earthen berm bisects the bottom of the E6 cell.

5) J. Lottig stated that the E6 cell is lower than the surrounding grade which effectively makes it a bowl-like structure. J. Lottig stated that there is a single 36" pipe which runs under the E6 cell which was designed to act as a storm water bypass system for the E6 cell. The pipe is designed to transport storm water from the watershed and gulch above the Landfill to the Landfill's storm water drainage system. J. Lottig indicated that the single subsurface pipe was designed so that the storm water running down Waimanalo Gulch would bypass the active cells including the E6 cell and not come into contact with municipal solid waste before ultimately discharging into the Pacific ocean. J. Lottig indicated that the subsurface drainage pipe was designed to prevent storm water from flowing into the E6 cell, and contacting active work areas. J. Lottig stated that the storm water that normally collects in the E6 cell flows through the cell into the leachate collection system where it would be collected and transported to the Waianae Wastewater Treatment Plant for treatment as industrial wastewater.

6) J. Lottig stated that on Sunday, December 19, 2010, the subsurface drainage pipe that conveyed storm water under the E6 cell had become plugged and that the storm water flowing down Waimanalo Gulch had run into the E6 cell from the North. Due to the grade and shape of the E6 cell, the E6 cell retained the storm water. J. Lottig stated that until the subsurface storm water bypass pipe was cleared on Sunday afternoon, December 19, 2010, storm water collected in the E6 cell, ultimately filling the E6 cell. J. Lottig estimated that the depth of storm water that filled the E6 cell was approximately 38 feet.

7) J. Lottig stated that at no time on December 19, 2010 did the storm water that collected within the E6 cell flow out of the Landfill except when it was actively pumped by Goodfellows Brothers. J. Lottig stated that following the clearing of the subsurface drainage pipe, Waste Management personnel including himself, Joseph Whelan, General Manager for Waste Management, and Matt Healke from Goodfellow Brothers., met to discuss the implications of not pumping the storm water from the E6 cell to the Landfill's storm water drainage system. J. Lottig stated that it was decided to pump the ponded water from the E6 cell into the storm water drainage system. J. Lottig stated that he did not order the pumping of the potentially contaminated storm water into the Landfill's storm water drainage system but that the order to pump could have been made by J. Whelan.

8) J. Lottig stated that between Sunday, December 19, 2010 and Thursday, December 23, 2010, the Landfill's contractor operated a pump to reduce the level of potentially contaminated storm water that had accumulated in the E6 cell. J. Lottig stated that he could not approximate the volume of water pumped into the Landfill's storm water drainage system at the time of inspection.

9) The Landfill's E6 cell (Photograph 1) was observed during the inspection. Ponding water was observed within the E6 cell. The E6 cell appeared to have been inundated by storm water as evidenced by high water marks observed on the sides of the cell. Significant amounts of exposed waste were not observed within the area upstream of the berm that bisects the E6 cell at the time of inspection. It appeared that the standing water saturated the E6 cell, and may have penetrated the leachate collection system while exposing solid waste which was buried in the cell.

10) In the North side of the E6 cell, an overturned porta-potty and a submerged piece of Landfill equipment was observed. The South side of the E6 cell, downstream of the berm (Photograph 2) was observed at the time of inspection. Significant amounts of exposed solid waste and refuse were observed within the area downstream of the berm in the E6 cell. The earthen berm which separated the E6 cell was damaged at the time of inspection. The DOH-CWB representatives observed a section of the intermediate cover had washed away,

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exposing solid waste from within the berm. The Landfill's contractor appeared nearly finished with covering the berm's exposed solid waste with new ground cover at the time of the inspection.

11) Where the ponding water was observed percolating through the solid waste downstream area of the E6 cell, a strong odor was detected by DOH-CWB representatives. The downstream area of the cell appeared significantly polluted with a mixture of solid waste and storm water.

12) The storm water observed within the E6 cell was clearly in contact with and passed though solid waste. As such, the liquid observed within the E6 cell was Landfill leachate.

13) No windblown litter was observed in the upper E6 cell area or in the area surrounding the E6 cell. The nearby litter fences (Photograph 4) were clean at the time of inspection. The solid waste observed within the downstream area of the E6 cell did not appear to have blown in. The solid waste appeared to originate from the E6 cell.

14) Statements by J. Lottig as well as the hoses and pumping apparatus observed in the E6 cell was clear evidence that leachate was purposefully discharged into the Landfill's storm water drainage system. The Landfill's storm water drainage system discharges into State waters at a shoreline outfall in the Pacific Ocean West of the Landfill. The Landfill is not authorized to discharge leachate to State waters. Since the subsurface drainage pipe that is designed to divert storm water from the upper watershed was cleared prior to the initiation of pumping activities, it appears that the unauthorized discharges were preventable. J. Lottig stated that the DOH was not contacted prior to the Landfill's initiation of pumping activities which resulted in the discharge of leachate to State waters. It is a violation of Hawaii Revised Statute 342D-50 to discharge a water pollutant to State waters without authorization.

In conclusion, it appears that the Landfill owners and operators, including the CCH and Waste Management violated Hawaii Water Pollution rules and regulations by discharging water pollutants to State waters without authorization. Further enforcement actions may be required to insure remediation of the violation.

At this time, the DOH-CWB will be pursuing enforcement action in the form of a Notice of Apparent Violation, and Request For Information. Further escalating enforcement actions may also be forthcoming as updated information regarding this case is received.

Name: Matthew Kurano
Signature:
Title: EHS
Date: 1/4/11

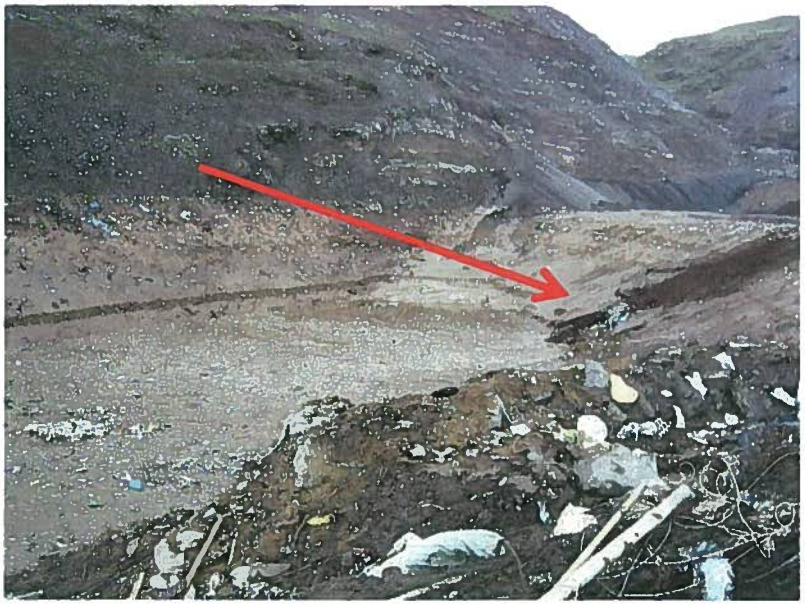
Name: Jamie Tanimoto
Signature: jtanimoto
Title: EHS
Date: 1/4/11

Photograph # 1 Date: December 23, 2010

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: North facing view of the E6 cell upstream of the berm. Ponding water (Red Circle), an overturned porta-pottie (Red Arrow) and a submerged piece of equipment (Blue Arrow) was observed in the cell at the time of inspection.



Photograph # 2 Date: December 23, 2010

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View facing North of the E6 cell downstream of the berm. The berm (Red Arrow) bisecting the E6 cell appeared to have ruptured and exposed solid waste was observed throughout the downstream side of the E6 cell. Goodfellow Brothers. was covering the exposed solid waste with soil in an apparent attempt to repair the berm damage at the time of inspection.

Photograph # 3 Date: December 23, 2010

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the E6 cell facing South. Solid waste was observed throughout the downstream side of the E6 cell. Pumping apparatus (Red Arrow) and hoses were observed connecting the E6 cell to the storm drainage system.

Photograph # 4 Date: December 23, 2010

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of a litter fence (Red Circle) above the E6 cell. No windblown litter was observed accumulated in the litter fence at the time of inspection.

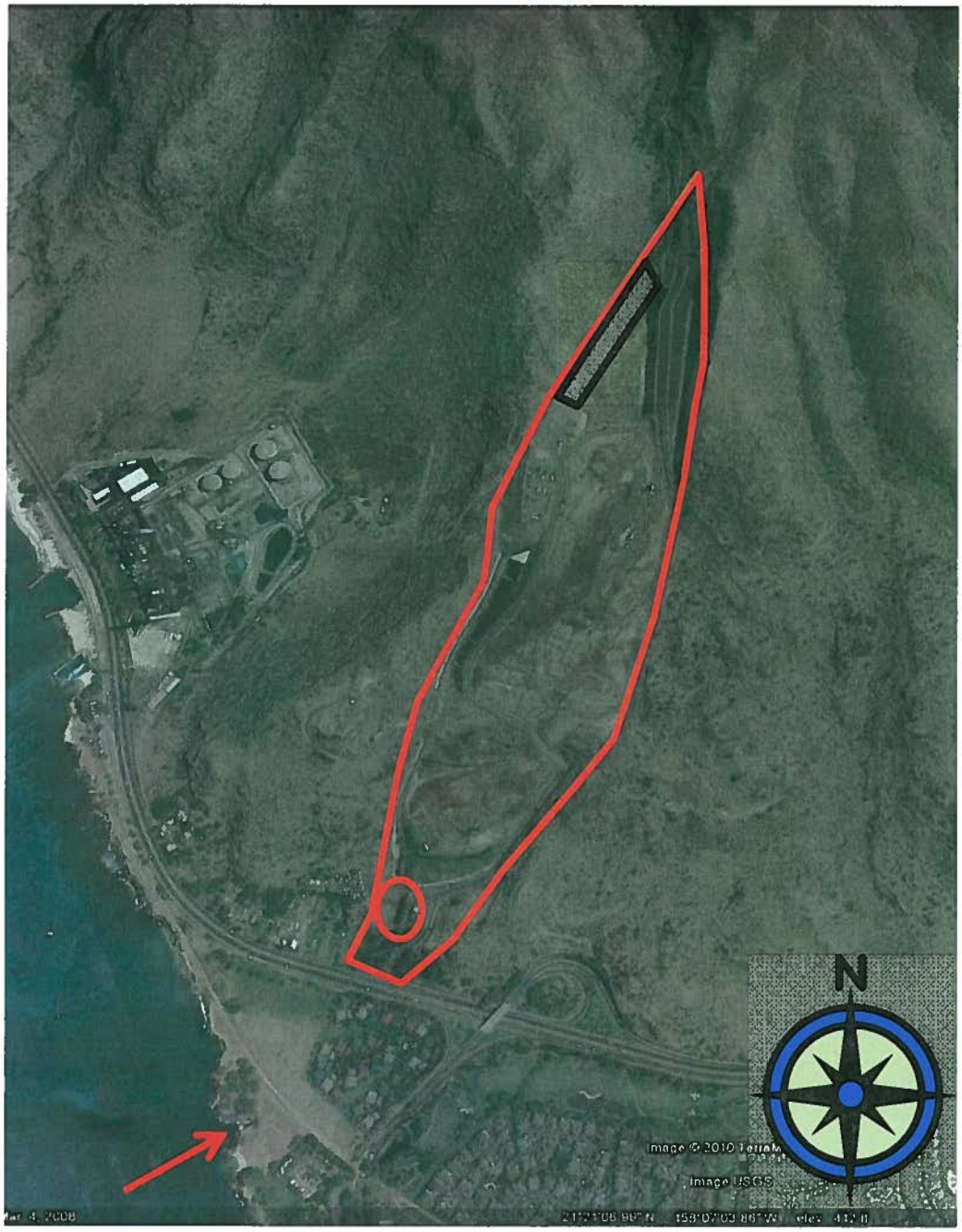


Image 1

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the Landfill (Red Outline). The E6 cell (Black Outline) was observed at the time of inspection. An earthen berm traversed the E6 cell. Discharges from the Landfill's storm water detention basin (Red Circle) enter into the Pacific Ocean at a shoreline outfall (Red Arrow) north of Ko Olina.

I certify that the *four (4)* attached photos described above were taken by the undersigned and are a true, accurate, and unaltered representation of what was observed on *December 23, 2010* at the *Waimanalo Gulch Sanitary Landfill, 92-460 Farrington Highway, Kapolei, Hawaii*.

Matthew R. Kurano

1/4/11

Date